Oblique Marked Relatives in Southern Interior Salish: Historical Implications for a Movement Analysis

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This paper investigates the distribution of the oblique marker in relative clauses in the Upper Nicola dialect of Okanagan and Nxa’amxcín (Willett, 2003), specifically in light of relative clauses in the Northern Interior Salish languages Stát’imcets (Davis, 2004, 2010) and Nlaka’p姆xícín (Kroeber, 1997, 1999; Koch, 2004, 2006) which show evidence for movement of a clause-internal DP to the left periphery of CP. Data from Southern Interior Salish languages also show evidence for clause-internal movement, but the distribution of the oblique marker suggests that the landing site of the moved DP is in a higher position. This distinction between Northern and Southern Interior Salish may be construed as evidence for a historical split with regards to relative clause formation, and may have occurred at roughly the same time as the inversion of prepositions to a DP-internal position in the Southern Interior.

1 Introduction

Okanagan, Nxa’amxcín (a.k.a. Moses-Columbian), Coeur d’Alene and the dialect continuum known as Spokane-Kalispel-Flathead comprise the Southern Interior sub-branch of the Salish language family. Okanagan is spoken in South-central British Columbia and North-central Washington. It is critically endangered, being spoken by only about 400 speakers. The Upper Nicola dialect of Okanagan is centered around the Douglas Lake (Spá: 스 mán) and Quilchena (Nlq’ícmathx) reserves, close to the city of Merritt, B.C., by perhaps as few as 12 speakers. Nxa’amxcín is spoken in central Washington, primarily in Colville territory, by fewer than forty speakers (Willett, 2003, 3).

Southern Interior Salish languages have syntactic structures which may be described as relative clauses, in the sense that these clauses contribute information which further specifies the referent of a head noun (Kroeber, 1999). A case may

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My research has been supported through grants from the Jacobs Research Fund and the American Philosophical Society. I wish to thank my main Okanagan consultants, Lottie Lindley and Sarah McLeod, for their patience. Thanks also to Ewa Czaykowska-Higgins, Henry Davis, Dwight Gardiner, and Karsten Koch for helpful feedback and for providing data.
also be made for a more formal definition, where a relative clause consists of a “syntactically complex modifier involving abstraction over an internal position of the clause (the relativization site) and connected to some constituent it modifies (the relative “head”)” (Bianchi, 2002). Example (1) shows a typical Okanagan relative in brackets. The determiner iʔ and the oblique marker t introduce the clausal remnant šw’ilstam t₁ “he/she was abandoned by x”. This clause modifies an NP head sqilxʷ “people”.1,2

(1) ixʔ?, ut iʔ sqilxʷ₂ [[iʔ t [Ω₃NP₂]₃DP₁]] šw’ilstam
DEM CONJ DET people DET OBL abandon-CAUSS-PASS
t₁CP₁ kʷukʷ cútlax “way’ cakʷ ?awsʔántam
gap EVID say-3PL.ABS yes DEON go-look-DIR-1PL.ERG
mat stím iʔ cáwts.”
EVID what DET doings-3SG.POSS

Meanwhile, the people who abandoned him, they said “We should go see what he’s doing.” (from Upper Nicola legend)

It has been well-established that relative clauses in the Northern Interior Salish languages Nxlʔáʔkepmx̱cín (a.k.a. Thompson) (Kroeker, 1997, 1999; Koch, 2006) and St’át’imcets (a.k.a. Lillooet) (Davis, 2004, 2010) are formed by movement of a clause-internal DP to the left-periphery of the relative clause CP, but besides Kroeker (1999), and a chapter in Willett (2003) on relative clauses in Nxaʔumx̱cín, little work has been done on relativization strategies of the Southern Interior. As illustrated by the bracketing in (1), I claim that clause internal movement also occurs in the formation of Okanagan relatives.3

This paper investigates several points pertaining to relativization in Okan-

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1 Similar to other branches of the family, Southern Interior Salish languages lack a dedicated relative pronoun or complementizer.

2 The determiner-oblique marker sequence iʔ t, in combination with the “passive” suffix -m indicate that it is the agent of the passive sentence (i.e. sqilxʷ “people”) which has been extracted. Since main-clause passive agent nominals are introduced by iʔ t and occur post-predicatively, the DP iʔ t sqilxʷ in (1) must have raised from a post-predicative position at some point during the derivation.

See Koch (2006) and Davis (2010) for a discussion of evidence pertaining to whether a matching or raising analysis is correct for Nləʔkepmx̱cín and St’át’imcets, respectively. Davis, for instance, concludes that some types of relatives in St’át’imcets require a matching analysis (Hulsey and Sauerland, 2006), however there is no evidence for raising in any St’át’imcets relatives. For the purposes of this paper, I assume that Okanagan patterns similarly to St’át’imcets, and therefore adopt the matching analysis as the null hypothesis. The subscript ‘2’ indicates that the external head noun is co-referent with the RC-internal one, which undergoes deletion through identity.

3 Okanagan relatives, like St’át’imcets relatives (Davis, 2010), show evidence for an A’ dependency within the relative clause (Chomsky, 1977); resumptive pronouns are not permitted clause-internally, and long range extraction is possible, subject to strong island effects. For reasons of space, I do not include these data.
gan and the Southern Interior. First, I show that the formation of at least some relative clauses in Okanagan (and at least one other Southern Interior language, Nxa’amxcín) involves movement of a clause-internal DP to the left-periphery of the relative clause. Secondly, I show that certain classes of oblique-marked relative clauses in Okanagan and Nxa’amxcín, which at first seem to defy a movement analysis, are explained if the moved DP lands in a higher position than the Spec CP position argued for by Davis (2010) for St’át’imcets. I claim that this difference represents a more general split between relative clause formation in the Northern and Southern Interior languages. Finally, I suggest that diachronically, there is a causal relation between the DP-internal “prepositions” characteristic of languages in the Southern Interior, and the structure of relative clauses in these languages. More specifically, inversion of prepositions to a DP-internal position may have conditioned a change in relative clause formation in the Southern Interior.

The paper is organized as follows: Section 2 discusses some basic facts about Okanagan DP structure, and introduces relative clauses. Section 3 summarizes the theory of relative clause formation by movement, and presents data showing that certain classes of relative clauses in Okanagan support a movement analysis for this language. Section 4 presents Okanagan data involving certain types of oblique-marked relative clauses which are problematic for the movement analysis, and then discusses similar data in other Interior Salish languages, which prove illuminating to the problem at hand. Section 5 presents my solution to this problem. Section 6 discusses further historical implications of this analysis. Section 7 raises further questions, and section 8 concludes.

2 Introducing Okanagan relatives

2.1 Okanagan DP Structure

Okanagan, like other Salish languages, is verb-initial, however in transitive sentences involving two overt nominal arguments, subject-verb-object (SVO) is an unmarked word order. The language exhibits a tight correlation between predicate transitivity and argument marking. While subject nominals will always be introduced by a determiner iʔ, object nominals are only introduced by iʔ if the predicate is formally transitive, as in (2a) (Lyon, 2011). If the predicate is formally intransitive, an object nominal will always be introduced by the oblique marker, as in (2b).

\footnote{By formally transitive, I refer to predicates which are affixed by any one of several transitiveizers: -nt- ‘directive’, -st- ‘causative’, -cit- ‘transitive applicative’, -it- ‘ditransitive applicative’. Such predicates take ergative subject morphology. For the purposes of this paper, ‘formally transitive’ also subsumes transitive nominalized possessive predicates, i.e. those predicates with possessor subjects,
Intransitive objects like (2b) are not DPs, since the oblique marker $t$ is not a determiner (Lyon, 2011). In specific grammatical environments, the determiner $i?$ and the oblique marker $t$ may co-occur, as when marking an instrument (3a). The determiner $i?$ also co-occurs with the locative markers $k'l$ ‘to/towards’, $l$ ‘at/on/in’, and $tl$ ‘from/than’ (3b). Together, these yield a structure resembling an English prepositional phrase except that the ‘preposition’ occurs internal to the DP (Kroeber, 1999, 71).6

Because locative markers and the oblique marker are in complementary distribution, it is reasonable to assume that they occur in the same syntactic position. I label both oblique-marked nominals (3a) as well as nominals which form a constituent with a locative marker (3b) as KPs, since the oblique marker and the set of locative markers both carry case information, and designate a nominal as standing in an oblique grammatical relation to the main predicate.7,8 Evidence that the

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5This DET-PREP ordering is a general feature of all languages in Southern Interior Salish, and contrasts with the PREP-DET ordering exhibited by the rest of the family. Kroeber (1999, 72) hypothesizes that “this peculiarity is readily explained if articles in these languages derive diachronically from demonstrative particles outside DP, or loosely adjoined to it, rather than from articles occupying the determiner slot within DP.” I suggest an alternative analysis which is somewhat at odds with Kroeber’s.

6The oblique marker signals that a nominal is a core oblique, and a locative marker signals that a nominal is a non-core-oblique, or locative adjunct in other words (Kroeber, 1999, 42-44).

7Bittner and Hale (1996) posit KP as the nominal equivalent of CP in the verbal domain. They
oblique marker and locative markers project their own syntactic category comes from conjunction (Lyon, in prep.), and NP-deletion in relative clause formation. I assume the following basic DP structure for Okanagan:

(4)

\[
\begin{array}{c}
\text{DP} \\
\text{D} \\
\text{K} \\
\text{NP} \\
\text{the/a} \\
\text{t} \\
\text{N} \\
\text{tklmilx}^w \\
\text{woman}
\end{array}
\]

The distribution of the determiner \( \text{i}? \) and the oblique marker and locative markers across various grammatical categories is shown in the table below.

<table>
<thead>
<tr>
<th></th>
<th>D</th>
<th>K</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects</td>
<td>i?</td>
<td>⊘</td>
<td>tklmilx^w</td>
</tr>
<tr>
<td>Transitive objects</td>
<td>i?</td>
<td>⊘</td>
<td>tklmilx^w</td>
</tr>
<tr>
<td>Oblique objects</td>
<td>⊘</td>
<td>t</td>
<td>tklmilx^w</td>
</tr>
<tr>
<td>Applicative (-xt-) Themes</td>
<td>⊘</td>
<td>t</td>
<td>tklmilx^w</td>
</tr>
<tr>
<td>Passive agent obliques</td>
<td>(i?)</td>
<td>t</td>
<td>tklmilx^w</td>
</tr>
<tr>
<td>Instrumental obliques</td>
<td>(i?)</td>
<td>t</td>
<td>tklmilx^w</td>
</tr>
<tr>
<td>Locative adjuncts</td>
<td>(i?)</td>
<td>{kl, l, tl}</td>
<td>tklmilx^w</td>
</tr>
</tbody>
</table>

Table 1. Distribution of Nominal-Introducing Particles in Okanagan

This distribution provides important evidence for an analysis in which relative clauses in Okanagan are formed by clause-internal movement of a DP.

I assume that \( K \) selects a DP for an argument, rather than \( D \) selecting a KP which is what I assume for Okanagan. My analysis is non-standard, since the relation between the selecting predicate head and the case-marked nominal is non-local (i.e. there is an intervening D-head). But despite being non-standard, some version of my analysis may be necessary, since it is undesirable to assume for (4) that \( i? \) is a \( K \), or that \( t \) is a \( D \). There are 2 main points against this: First, such an analysis must analyze DP-internal locative markers as determiners, which ignores the fact that historically they were never determiners. Second, \( i? \) is semantically speaking a context-sensitive domain restrictor (Lyon, 2011), a role argued by Gilson (2009) to be universally associated with the D position. Also, under the assumption that \( D \) always selects for a KP, there must be a null case-marker for subject and transitive object DPs.
2.2 Relative Clauses

Relative clauses may modify an NP directly dominated by either a DP (5), or a KP (6). Additionally, the modifying clause may either precede or follow the head, as may be seen by comparing (5a) with (5b), and (6a) with (6b).

(5) a. way' c'a?-nt-is i? sqoltmix' i? wik-s.
yes punch-DIR-3SG.ERG DET man DET see-(DIR)-3SG.ERG
He hit the man he saw.

b. way' c'a?-nt-is i? wik-s i? sqoltmix'.
yes punch-DIR-3SG.ERG DET see-(DIR)-3SG.ERG DET man
He hit the man he saw.

(6) a. John k'wul-om t yamxwa? t
John make-MID OBL basket OBL
kl-s-n-q'wi-tan-s.
UNR.POSS-NOM-n-pack-INSTR-3SG.POSS
John made the basket he was going to carry.

b. John k'wul-om t kl-s-n-q'wi-tan-s t
John make-MID OBL UNR.POSS-NOM-n-pack-INSTR-3SG.POSS OBL
yamxwa?.
basket
John made the basket he was going to carry.

I refer to head-initial relatives like (5a) and (6a) as post-nominal, and head-final relatives like (5b) and (6b) as pre-posed, following Davis (2010). Okanagan relatives must have particles (i.e. determiners and/or case markers) introducing both
the head and the clausal remnant.\footnote{This effectively excludes \textit{pre-nominal} (DET [CLAUSE NP]) and \textit{post-nominal} (DET [NP CLAUSE]) relatives as possibilities in Okanagan, although they are possible in other Salish languages, as shown in the following chart:}

Any grammatical role may be relativized in Okanagan. In addition to the relativized transitive and intransitive objects seen above in (5) and (6), subjects may be relativized (7) as well as themes of ditransitives (9):

\begin{equation}
\text{(7) } \text{i}'\text{ }\text{sq}\text{\v acute} \text{mt}\text{imixw } \text{i}'\text{ }\text{q}\text{o\acute{y}-nt-}\text{i}\text{s } \text{i}'\text{ }\text{q}\text{o}\text{\acute{y}}\text{min } \text{k}\text{w}\text{u} \text{ \text{DET man } DET write-DIR-3SG.ERG DET book 1SG.GEN} \\
\text{x}\text{\acute{w}ic-xt-s } \text{\text{onts}\text{\acute{a}} } \text{t } \text{i-kt-}\text{q}\text{o}\text{\acute{y}}\text{min.} \text{give-DITR-3SG.ERG 1SG.INDEP OBL 1SG.POSS-UNR.POSS-book} \text{The man who wrote the book gave me a book.}
\end{equation}

\begin{equation}
\text{(8) } \text{k}\text{w}\text{in-t } \text{i}'\text{ }\text{q}\text{\acute{a}q}\text{x\acute{o}\acute{m}x } \text{i}'\text{ }\text{x}\text{\acute{w}ic-xt-m-n.} \text{take-DIR DET fish } \text{DET give-DITR-2SG.ACC-1SG.ERG} \text{Take the fish that I’m giving you.}
\end{equation}

Unlike many other Salish languages, Okanagan relative clauses do not exhibit any special inflectional pattern. In other words, pronominal morphology found on relative clauses may also be found in main clauses (Kroeber, 1999).\footnote{There are nevertheless differences in the distribution of main versus subordinate clause inflectional patterns. It is difficult to extract an intransitive oblique object from a predicate inflected with the -m or (-\text{\v acute}x\text{\acute{a}})x intransitive suffixes, although apparently possible with a third person subject:}

In Nxa?amxcín, post-nominal relatives are possible (Mattina, 2006, 124), but the oblique marker is becoming ‘optional’ here (Willett, 2003, 109). I discuss my analysis of Nxa?amxcín pre-nominal relatives in section 5.

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|c|c|}
\hline
 & Pre-nominal & Post-nominal & Post-nominal & Pre-nominal \\
\hline
St’àti’mcets & ✓ & ✓ & ✓ & x \\
Nko’?i kepmxcin & x & x & ✓ & ✓ \\
Okanagan & x & x & ✓ & ✓ \\
Nxa?amxcín & ✓ & ✓ & ✓ & x \\
\hline
\end{tabular}
\caption{Relative Clauses in Nxa?amxcín}
\end{table}

On the other side of the coin, nominalized possessor predicates, such as \textit{i-sc-wik} “my seeing”/“I saw” in (9b), are generally not used as main-clause predicates, although nominalized future forms inflected with a middle suffix, such as \textit{i-ks-pulsam} “I’m going to beat him” are often found in non-embedded contexts.
corresponding nominalized object relative with a possessor subject.11,12

(9) a. t’áp-nt-in iʔ wík-ʔn iʔ skak’ákaʔ.
    shoot-DIR-1SG.ERG DET see-(DIR)-1SG.ERG DET bird
    I shot the bird that I’ve seen.

    b. t’áp-nt-in (iʔ) i-sc-wík iʔ skak’ákaʔ.
    shoot-DIR-1SG.ERG (DET) 1SG.POSS-PERF-see DET bird
    I shot the bird that I’ve seen.

When transitive subjects are relativized, speakers often prefer to passivize the predicate. In (10), the clausal remnant is inflected as passive by the suffix -m, and is introduced by the sequence iʔ t, which together indicate that the passive agent has been extracted:13

(10) sc-ʔxaʔʔaʔ-ám-s iʔ sák’maʔmáyaʔm-s iʔ t
    IMPF-look.for-MID-3SG.POSS DET teacher-3SG.POSS DET OBL
    knxít-(t)-m iʔ l sänqəɨmíntən.
    help-DIR-PASS DET LOC school
    He’s looking for the teacher that helped him at school.

Headless relatives are also common in Okanagan (11). I assume that these are a special type of post-nominal relative, where the head noun, and its selecting determiner, are both null.14

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11The exact semantic difference between (9a) and (9b), if there actually is one, remains unclear. Speakers indicate that nominalized forms like (9b) are past-tense completive, while ergative forms like (9a) are present-tense completive, but my research suggests that there is no clear demarcation between the two, and that both can be uttered felicitously within an identical discourse situation. Nominalized relatives may have less clausal structure than relatives inflected with ergative subjects (Thompson, 2011), but since nominalized clauses can function as main predicates in Okanagan and select for DP arguments, the case can also be made that extraction of such an argument from a nominalized clause involves clause-internal movement. On that note, it is not yet established whether there is any difference between predicate and clausal nominalization in subordinate clause contexts, since there are no pre-predicative auxiliaries in Okanagan to which a nominalizer might attach, thereby providing evidence for a distinction between predicate and clausal nominalization.

12The determiner iʔ regularly elides before 1st person possessive prefix in- and 2nd person possessive prefix an-, as in (9b), and lowers to aʔ before customary prefix (a)z-, as in (11b).

13See example (1) for a similar case.

14Davis (2010) argues against a similar analysis for St’át’imcets, instead claiming that relatives in this language are all derived from a common pre-nominal structure. His analysis will not work for Okanagan, however, since Okanagan (unlike St’át’imcets) has pre-posed relatives.
(11) a. q'qintixw iʔ q'iʔOlq'qístmæn.
   write-DIR-2SG.ERG DET speak-CAUS-2SG.ABS-1SG.ERG
   Write down what I’m telling you.

b. kaʔkícən (iʔ) acsłmístən.
   find-(DIR)-1SG.ERG (DET) CUST-lose-CAUS-1SG.ERG
   I found the one I was looking for.

Demonstratives appear to function as relative clause heads (12), but since demonstratives often adjoin to a constituent DP (Lyon, 2010), (12) may also be analyzed as a headless relative if we assume that the adjoined DP is null in these cases.

(12) wik-ən ixif iʔ ks-knxíst-m-s.
   see-(DIR)-1SG.ERG DEM DET FUT-help-DIR-2SG.OBJ-3SG.ERG
   I saw the one who will help you.

I now move on to a more technical discussion of the syntactic processes involved in relative clause formation in Okanagan.

3 Relative clause formation by movement

As first noted by (Kroeber, 1997, 396) for Nłőʔkepmxcín, locative relative clauses seem to involve clause internal movement of a DP to the left periphery of a relative clause. Kroeber notes that in examples like (13), “…the preposition codes the relation of gap to relative clause predicate, not the relation of the whole relative clause to the matrix predicate.”

(13) (w)ʔéx kn xʔiʔ-m te npúytn2 [[n-e [∫NP3]PP1]]
   PROG 1SG look.for-MID OBL.DET bed in-DET
   xʔuˈůy̑ wn sʔwˈóyt t1CP]
   FUT 1SG.CONJ sleep
   I’m looking for a bed where I’m gonna’ sleep. (Koch, 2006, 132)

In other words, because the preposition n “in” in (13) helps to specify the location of the sleeping event, and not the looking event, the preposition may plausibly be analyzed as having moved from a base position following the relative clause. Davis (2004) and Koch (2006) have shown for St’át’imcets and Nłőʔkepmxcín respectively, that the determiner also moves, or rather, the DP “pied-pipes” the preposition to a clause-initial position. This is illustrated by the bracketing in (13).15

15Since Nłőʔkepmxcín determiners vary with regards to their spatio-temporal properties, Koch (2006) is able to show that the determiner introducing the relative clause shows the spatio-temporal
Recall that for Okanagan, the oblique marker $t$ and locative markers $\hat{k}l, l$ and $tl$ may co-occur with $i?$. These particle sequences help provide evidence for clause-internal movement. In main clauses, the combination of $i?$ and $t$ introduces instruments and passive agents, as in (14), and the combination of $i?$ and a locative particle designates a DP as a locative adjunct, as in (15) $i?\ tl\ sq\ tlm\] "from the man".

\begin{enumerate}
\item \text{a. t$\hat{s}$ap-nt-fs\ [i?\ tl\ swlwlmnk$_{K,P}$]$_{DP}$].} \\
\text{shoot-DIR-3SG.ERG DET OBL gun} \\
\text{He shot it with a gun.}
\item \text{b. Mike $\hat{\text{c}}$umq$\text{s}$-nt-m\ [i?\ tl\ tklmf]$w_{KP}$]$_{DP}$].} \\
\text{Mike kiss-DIR-PASS DET OBL woman} \\
\text{Mike was kissed by the woman.}
\end{enumerate}

\begin{enumerate}
\item \text{(15) ac-ylt-mf-st-lax\ [i?\ tl\ sq\ tlmf]$w_{KP}$]$_{DP}$]}. \\
\text{CUST-run.away-APPL-CAUS-3PL.ERG DET LOC man} \\
\text{They’re running away from the man.}
\end{enumerate}

In support of a movement analysis for Okanagan relatives, consider that when instruments and passive agents like those in (14) are relativized, the relative clause is introduced by both $i?$ and $t$, as in (16):

\begin{enumerate}
\item \text{(16) a. k$w$u\ tl$i?$q$w$-mt\ i?\ nik-mn$_2$\ [i?\ t\ [\emptyset_{NP_2}]_{DP_1}].} \\
\text{1SG.GEN show-DITR DET knife DET OBL} \\
\text{nik-nt-$x^w$\ $t_1$CP].} \\
\text{cut-DIR-2SG.ERG} \\
\text{Show me the knife that you cut it with.}
\item \text{b. Mike wiks\ i?\ tklmf}$w_2$\ [i?\ t\ [\emptyset_{NP_2}]_{DP_1}].} \\
\text{Mike see-(DIR)-3SG.ERG DET woman DET OBL} \\
\text{c$\text{um}$q$\text{s}$-nt-m\ $t_1$CP].} \\
\text{kiss-DIR-PASS} \\
\text{Mike saw the woman he was kissed by.}
\end{enumerate}

Note that $i?$ and $t$ normally only co-occur when introducing a passive agent

\text{properties of the relative clause predicate, rather than the main clause predicate, confirming that movement also occurs in relatives which do not involve locative marking. For Okanagan, it is not possible to use different determiners as a diagnostic for movement, since there is only one determiner involved in relativization, $i?$}. Nevertheless, the oblique marker $t$ as well as the other locative markers, help to confirm that movement has occurred.
or instrument, or before clauses from which these grammatical roles have been extracted. In extraction contexts involving passive patients, for example, *i? t may not introduce the relative clause, only *i?. (17) shows an example of an extracted patient, where the clausal remnant is introduced by the determiner *i?, and an insitu clause-internal agent is introduced by *i? t.

(17)  John sačñaʔaʔáms  iʔ tkłmilxʷ iʔ (*t)
       IMPF-look for-MID-3SG.POSS DET woman DET (*OBL)
       knxtom  iʔ  t  sqəltmíxʷ.
       help-(DIR)-PASS DET OBL man
       John is looking for the woman who was helped by the man.

Given that the distribution of the sequence *i? t is limited to the same grammatical subset in both extraction and non-extraction contexts, the sequence *i? t in (16) constitutes evidence for clause-internal movement.

Similarly, when a locative adjunct is extracted in Okanagan, the relative clause is introduced by a determiner plus locative marker sequence, thus furnishing evidence parallel to Nlakoʔkpmxcín (13) that clause-internal movement has indeed occurred. Compare (15) and (18a), in particular.

(18) a.  wik-ən  iʔ  sqəltmíxʷ₂ [iʔ  t[ΩNP₂]DP₁]
       see-(DIR)-1SG.ERG DET man DET LOC
       ac-ylt-mí-st-lax
       CUST-run.away-APPL-CAUS-3PL.ERG
       I see the man that they’re running away from.

b.  uc  c-my-st-ɪxʷ  iʔ  sqəltmíxʷ  iʔ  kl
       YNQ  CUST-know-CAUS-2SG.ERG DET man DET LOC
       tw-mí-st-om-ən
       sell-APPL-CAUS-APPL(?)-1SG.ERG DET shirt
       Do you know the man that I sold the shirt to?

Following Davis (2010) and Koch (2006), it seems clear that for Okanagan (16) and (18) at least, a DP internal to the relative clause has raised to the left periphery of the relative clause CP. The noun in the moved DP then plausibly undergoes deletion through identity with the clause exterior head NP. The following structure is thus a plausible representation of the relative clause in (18a):
Assuming that all relative clauses in Okangan are similarly formed, the structure in (19) implies that the sequence of particles introducing the clausal remnant should always code the relation of the gap to the relative clause predicate. This holds true in some cases. For example, consider that subject and transitive object extractions in Okangan, e.g. (5) and (7), are characterized by having the determiner i? introduce both the head and the clausal remnant. Since transitive predicates always select for i? DP objects in main clause contexts (20a), the prediction is that when an object is extracted, the clausal remnant will be introduced by only a determiner i?. This prediction is upheld (20b).  

(20) a. wik-s i? sqəltmíxʷ
    see-(DIR)-3SG.ERG man
    He saw the man.

    b. way ḋaʔ-nt-is i? sqəltmíxʷ  i? wik-s.
       yes punch-DIR-3SG.ERG DET man DET see-(DIR)-3SG.ERG
       He hit the man he saw.

As a working hypothesis then, I assume that all Okangan relatives are formed by clause-internal movement. Relative clauses are canonically post-nominal, and pre-posed relatives are derived from post-nominals by an additional movement of the relative clause CP to a position preceding the DP containing the head, presum-
ably Spec DP. Compare the post-nominal relative clause \( i? \text{sqəltmíx} \) \( i? \text{kwu wiks} \) “the man who saw me” (21a) with its equivalent pre-posed version \( \text{kwu wiks} \ i? \text{sqəltmíx} \) (21b):

\[
\text{(21) a.} \\
\text{DP} \\
\left/ \begin{array}{c}
\text{K} \\
\text{NP} \\
\text{C} \\
\text{Spec} \\
\text{DP}_{t} \\
\text{C} \\
\text{Spec} \\
\text{DP}_{t} \\
\text{K} \\
\text{NP} \\
\text{N} \\
\text{proj}
\end{array} \right.
\]

\[
\text{b.} \\
\text{DP} \\
\left/ \begin{array}{c}
\text{Spec} \\
\text{CP}_{t} \\
\text{Spec} \\
\text{DP}_{t} \\
\text{C} \\
\text{Spec} \\
\text{DP}_{t} \\
\text{K} \\
\text{NP} \\
\text{N} \\
\text{proj}
\end{array} \right.
\]

Extending this movement account to all Okanagan relatives encounters several problems, however. First and foremost, the distribution of \( t \) before a clause

\[17\text{Or possibly adjoined to DP. Pre-posed relatives in Okanagan are generally more marked than post-nominal forms, for reasons to be discussed.}\]
does not always code the relation of the gap to the relative clause predicate.\textsuperscript{18} The next section discusses these problematic data.

4 Extending the movement account

4.1 Problematic cases of oblique marking

Not all relative clauses in Okanagan conform so nicely to the movement account described in the previous section. Consider that relative clause predicates may be inflected with the future prefix \(ks\). In these cases, the clausal remnant is often introduced by both \(i\) and \(t\), but this sequence does not code the relation of the gap to the relative clause predicate. (22) shows that in main clause contexts, a future transitive predicate cannot select for an object introduced by \(i\) \(t\), yet in extraction contexts (23), the oblique marker \(t\) may co-occur with the determiner.\textsuperscript{20}

\begin{itemize}
\item \textbf{(22)} \(ks\)-ya?-yá?xa?-səlx \(i\) (*\(t\) \(p\)w\(m\)ín
\end{itemize}
\[FUT\text{-}show\text{-}(\textit{DIR})\text{-}3\text{PL}.\text{ERG} \quad \text{DET} \quad (*\text{OBL}) \quad \text{drum}\]
\[\text{They will look at a drum.}\]

\begin{itemize}
\item \textbf{(23)} \(\text{way} \quad i\text{-}ks\text{-}k^w\text{ul}\text{-}əm \quad i\) \(p\)w\(m\)ín \(i\)
\end{itemize}
\[\text{yes} \quad 1\text{SG.}\text{POSS}\text{-}FUT\text{-}make\text{-}MID \quad \text{DET} \quad \text{drum} \quad \text{DET} \quad (\text{OBL})\]
\[\text{\(ks\)}\text{-}ya?\text{-}yá?xa?-səlx.\]
\[\text{FUT\text{-}show\text{-}(\textit{DIR})\text{-}3\text{PL}.\text{ERG} \quad \text{I will make a drum that they will look at.}}\]

(24-25) show that the same pattern surfaces with subjects. In main clause contexts, subjects of future-inflected transitives may not be introduced by the oblique marker \(t\), only by \(i\), but (25a,b) confirms that in extraction contexts, the sequence \(i\) \(t\) is possible.

\textsuperscript{18}Other issues which require further investigation are: (i) Whether KP movement (rather than DP movement) occurs for cases where a relative clauses modifies a KP-contained head (6), or whether there may be a null determiner in the language; (ii) An explanation for the ‘matching effect’ displayed between the head-introducing and clause-introducing particles, a phenomenon which I touch on in the next section; (iii) Ditransitive theme extractions, which still do not follow from my extension of the movement account.

\textsuperscript{19}Recall that for (22), an oblique marker is not possible, since ‘the drum’ is a grammatical object, and not an instrument or passive agent.

\textsuperscript{20}From this point onwards, I highlight the oblique marker which introduces a relative clause in blue type, to help the reader distinguish between this occurence of \(t\), and its other role as a nominal case marker.
At this point, it is worthwhile to briefly discuss the apparent ‘matching’ relation which holds between the head-introducing and clause-introducing particles in (25a) and (25b). Notice that for (25b), the oblique marker * is optional, while for (25a), it is the determiner * that is optional. This difference appears to be due to the transitivity of the main clause predicate. Recall that in Okanagan, formally transitive predicates like * “I see s.t.” in (25b) will always select a full DP as an object, while formally intransitive predicates like * “to see” (25a) will always select for an oblique-marked KP as an object. This tight correlation between predicate transitivity and nominal marking drives the matching relation between the particle introducing the head noun and which particle must introduce the future-marked clausal remnant. The presence or absence of the optional particle in these cases seems to be a surface-level phenomena, there being no semantic difference between forms with and without the optional particle, and so it seems reasonable to assume that both particles are underlyingly present in these cases.21

The fact that this ‘optional’ oblique marker * is only apparent in extractions from future-inflected predicates is interesting, especially since what I analyze as the equivalent particle in Nxaʔamxcín is not dependent on the tense/aspect properties of the clausal remnant. It is quite possible that this * has been borrowed by the Upper Nicola dialect from Nləʔkepmxcín, and that it occurs only before future *- on analogy with the Nləʔkepmxcín * and Secwepemcsín * tek ‘oblique+irrealis determiner’. In both Nləʔkepmxcín and Secwepemcsín, this sequence occurs before ‘unrealized’ or ‘irrealis’ intransitive objects, and in Nləʔkepmxcín at least, also before relative clause predicates with unrealized/irrealis heads. If this hypothesis is correct, the prediction is that this * will be absent from other Okanagan dialects not so heavily influenced by Nləʔkepmxcín.

This point also brings to mind the historical connection between the irrealis *-type determiners of the Northern Interior, and future *- in Okanagan, and raises the question of whether the historical developments discussed in this paper might not be related to the absence of a * determiner in Okanagan,
But here we encounter a problem. Neither (25a) nor (25b) are consistent with the movement account, since in neither case does the sequence \( i? t \) code the relation of the gap to the clausal remnant. In other words, under the movement analysis, the prediction is that for both (25a) and (25b), \( i? t \) must introduce the clausal remnant and \( t \) should be ungrammatical, since these are not instrument or passive agent extractions. If the oblique marker \( t \) did not undergo raising with a constituent clause-internal DP in these cases, then what is the function of \( t \) here, and where did it come from?

To begin to answer this question, it is important to note that Okanagan does show evidence that in certain cases, the oblique marker cannot have moved as a constituent with a post-clausal DP. Examples (26a,b) below are the structural equivalents to examples (25a,b) above, the difference being that the pronominal object of the clausal remnant is realized as a pro-clitic, rather than a suffix. In these cases, \( t \) occurs between the object clitic and the remnant predicate:

\[
(26) \quad \begin{align*}
\text{a.} & \quad \text{kn} \quad \text{ks-xa}?'\text{a}?'-\text{mixa}?'\text{x} \quad \text{t} \quad \text{tawit}_2 \quad [\{i? \} \quad [\otimes N_{P_2}]_{DP_1}] \\
& \quad 1\text{SG.ABS} \quad \text{FUT}-\text{look}.\text{for-INCEPT} \quad \text{OBL} \quad \text{boy} \quad (\text{DET}) \\
& \quad k^wu \quad t \quad \text{ks-knxit-s} \quad t_1 \quad \text{la}'? \quad \text{lap}_{CP}]. \\
& \quad 1\text{SG.GEN} \quad \text{OBL} \quad \text{FUT}-\text{help}.\text{(DIR)}-3\text{SG.ERG} \quad \text{COMP} \quad \text{tomorrow} \\
\text{I'm gonna look for a boy to help me tomorrow.}
\end{align*}
\]

\[
\text{b.} & \quad \text{aws-xa}?'\text{a}?'-\text{nt-in} \quad i? \quad \text{tawit}_2 \quad [\{i? \} \quad [\otimes N_{P_2}]_{DP_1}] \\
& \quad \text{go}-\text{look}.\text{for-DIR}-1\text{SG.ERG} \quad \text{DET} \quad \text{boy} \quad \text{DET} \quad 1\text{SG.GEN} \\
& \quad (t) \quad \text{ks-knxit-s} \quad t_1 \quad \text{la}'? \quad \text{lap}_{CP}]. \\
& \quad (\text{OBL}) \quad \text{FUT}-\text{help}.\text{(DIR)}-3\text{SG.ERG} \quad \text{COMP} \quad \text{tomorrow} \\
\text{I went looking and I found the boy who's gonna help me tomorrow.}
\end{align*}
\]

Since the 1st person object clitic \( k^w u \) in (26a,b) is certainly not a constituent with the moved DP, it can safely be concluded that the oblique marker \( t \), which follows the clitic in this case, is also not a constituent with the moved DP, ergo it does not undergo movement. Concerning the position of \( k^w u \), I assume a morpho-phonological analysis of pronominal pro-clitics, whereby they attach to the left-most element of a clause. Since \( t \) does not move in (26a,b), but rather delimits the left-periphery of the clause, a pronominal pro-clitic will attach to the left of \( t \).

or its probable reanalysis as an aspectual prefix.


23This predicts that a DP object, whose position is not morpho-phonologically determined, but syntactically determined, may not substitute for the object proclitic in such cases. While overt clause-internal nominal DP objects of subject-extracted relatives must occur after the clausal remnant, I have not yet tried to substitute an object DP for the proclitic in the cases shown above.
Note that pronominal pro-clitics also apparently attach to \( t \) in cleft contexts (27a), and regularly precede the complementizer \( \text{\textacutesign a} \) in contexts involving clausal subordination (27b):

(27) a. anwí? \( k \)\(^w\) \( t \) sq̂oltmíx\(^w\) i? \( k \)\(^w\) ylmíx\(^w\)om.
   2SG.INDP 2SG.ABS OBL man DET 2SG.ABS chief
   ‘You’re the man who is the chief.’

b. cak\(^w\) \( \times \)ast \( k \)\(^w\) \( \text{\textacutesign a} \) kã?kíc-\( \omega \)m \( t \) siw\( k \)\(^w\).
   DEON good 2SG.ABS COMP find-MID OBL water
   ‘It’d be good if you go find some water.’

The implication from data like (26) is that when oblique \( t \) precedes a relative clause, it does not necessarily code the relation of the gap to the clausal remnant, since it does not necessarily undergo movement. In other words, when a sequence \( i? t \) precedes a relative clause, \( t \) is either a case marker which moves as a constituent with a clause-internal DP (i.e. in instrument and passive agent extractions), or \( t \) is something else (i.e. in argument extractions from future-marked predicates). There is a syntactic difference between these two different types of oblique marking.

I claim that the \( t \) found in data like (23), (25), and (26) is a remnant of an earlier relativization strategy in Okanagan, whereby \( t \) introduced all relative clauses. This claim is supported from data in neighboring Salish languages. Consider that in the Northern Interior Salish languages of Nh\( ò \)kepmxc\( ì \)n (Koch, 2006) and Secwepemctsin (Gardiner, 1993), non-locative clausal remnants are introduced by the oblique marker \( t(e) \), regardless of the grammatical status of the moved constituent. The Southern Interior language Nxa?amxc\( ì \)n also exhibits data showing that its oblique marker \( t \) cannot have moved together with a clause-internal DP. For these languages, as with Okanagan, only specific grammatical roles may be marked as oblique, and so assuming that all Interior Salish languages form relative clauses by a movement of a clause-internal DP to the left periphery of the clause, the relatively unrestricted occurrence of the oblique marker before relative clauses in these languages may be construed as evidence that it does not necessarily move with the clause-internal DP. In addition, an interesting and relevant difference emerges between Northern and Southern Interior Salish languages with regards to the linear position of the oblique marker in these cases, which in turn affects the mechanics of the movement analysis. It is to these languages that I now turn.
4.2 Evidence from Northern Interior Salish: Nləʔkepmxcín and Secwepemcetsín

For Nləʔkepmxcín, spoken to the north and west of Okanagan country, oblique markers nearly always introduce relative clauses.\(^{24,25}\) Similar to the facts in Okanagan, Nləʔkepmxcín oblique \(t\) introduces intransitive objects and ditransitive themes, and not transitive objects in main clause contexts. It does occur before relative clauses, however, even in cases where a transitive object has been extracted (28a).

\[(28)\quad \text{a. (w)?éx xe? cu-t-ə-éne e zéwtn t-e} \]
\[
\text{PROG DEM fix-TR-3SG.OBJ-1SG.ERG DET cup OBL-DET} \\
\text{máiy-t-st-ə-ne,} \\
\text{break-1M-CAUS-3SG.OBJ-1SG.ERG} \\
\text{I am fixing the cup that I broke. (Koch, 2006, 141)}
\]

\[(28)\quad \text{b. ... e he?use? t-k xwuy’ n-s-4aʔxans.} \]
\[
\text{... DET egg OBL-IRR FUT 1SG.POSS-NOM-eat(INTRANS)} \\
\text{(I boiled) an egg that I’m going to eat. (Koch, p.c.)}
\]

Since the relative clause predicates máʔstne “I broke x” in (28a) is formally transitive, the oblique preposition \(t\) cannot have raised with the determiner \(e\) from a clause-internal position.\(^{26}\) As Koch (2006, 133) notes, “there must be some higher position, possibly an adjunct to CP, containing the oblique marker \(t^\prime\), which he labels XP. This relevant structure is represented by (29):

\[\text{Exceptions are as follows: (i) before the remote determiner } t \text{ where } t \text{ phonologically reduces (Kroeber, 1997; Koch, 2006); (ii) in the case of locative relatives, where a preposition introduces the clause; and (iii) in the case of headless relative clauses (Koch, 2006, fn5). Interestingly, } t \text{ does surface before headless relatives in Nxaʔamxcín and Okanagan.}

\[\text{The oblique marker } t \text{ in Nləʔkepmxcín is segmentable from the ‘specific’ and ‘unrealized’ determiners } e \text{ and } k. \text{ In keeping them together, I follow the convention of Thompson and Thompson (1992), who analyze } t \text{ and } k \text{ as a “single descriptive marker” (p.153), for example.}

\[\text{The present determiner } (h)e \text{ coalesces with the oblique marker } t \text{ after movement, to form } te. \text{ The intransitive predicate } haʔxans “eat’ in (28b) will take an oblique marked object in main clause contexts, including optionally the irrealis determiner } k \text{ (Koch, p.c.), and so it is possible to analyze } tk \text{ in (28) as introducing a PP which has raised from a post-clausal position, on analogy with Nləʔkepmxcín (13) and Okanagan passive agent and instrument extractions. In other words, } t \text{ in (28b) carries nominal case information, and has coalesced with the } t \text{ which normally introduces relative clauses in Nləʔkepmxcín.}

\]
The categorial identity of XP is not immediately important for our purposes, but the existence of an intermediate projection is important.27

Similar to Nləʔkepmxcín, headed relative clauses in Secwepemctsín (a.k.a. Shuswap) are introduced by the oblique case marker to (Gardiner, 1993, 67). (30a) shows a subject extraction, and (30b) an object extraction:

(30) a. č-lx-m-st-etàn y sqəlmxʷ to
    cust-know-unsp-caus-1sg.erg det man obl
    wik-t-x.
    see-tr-2sg.erg
    I know the man you saw. (Gardiner, 1993, 67, ex. 166)

b. pnheʔn k-wik-t-x-wəs y sqəlmxʷ to
    when irr-see-tr-2sg.erg-3sg.dept det man obl
    cũʔeqs-n-s y Mary.
    kiss-tr-3sg.erg det Mary
    When did you see the man that kissed Mary? (Gardiner, 1993, 162)

In both cases, the nominal sqəlmgʷ “man” is underlyingly a direct argument of a transitive relative clause. Assuming that Secwepemctsín relatives are derived by movement, the prediction is that the clausal remnant should be introduced by one of the three ‘direct case’ determiners: proximal y, distal l, or irrealis k.28 The

---

27Koch (p.c.) is currently investigating the hypothesis that XP is a focus projection, i.e. FocP.

28See Gardiner (1993, 24) for a discussion of the Secwepemctsín determiner system. It seems unlikely that the oblique marker to which introduces relatives in Secwepemctsín consists of t plus a coalesced determiner (which is the case for Nləʔkepmxcín), at least synchronically, given the phono-
fact that this prediction is *not* upheld means one of two things: (i) In contrast to the other two Northern Interior Salish languages, Secwepemctsín relative clauses are not formed by movement; or more likely (ii) the moved determiner elides after the oblique marker. The second hypothesis is supported by several points.

Firstly, Kroeber (1999, 339) presents data showing that Secwepemctsín locative extractions may involve ‘preposition fronting’, similarly to Nłʔə?kepmxcín (13):²⁹

(31) m-wík-t-ś  n̓-éne  s-c-ʔ ál-cn-s
    UNSP-see-TR-3SG.ERG  OBL-here  DET  NOM-STAT-freeze-edge-3SG.POSS

  n̓ cptúkʷ  n  sxʷúynt  w-s  n  séxʷm-ás
  DET  hole  in  ice  PROG-3SG.CONJCT  at  bathe-3SG.CONJCT

  twwíwt.
  DET  youth

There they saw the frozen edges of the hole in the ice where the youth had bathed. (ShL T.8.172)

Secondly, note that headless relative clauses are introduced by a proximal γ or distal l determiner, and not the oblique marker ta (Gardiner, 1993):

(32) č̓-lʲm-st-étn
    CUST-know-UNSP-CAUS-1SG.ERG  DET  see-TR-2SG.ERG

I know the one you saw. I know that you saw him. (Gardiner, 1993, 67)

The fact that headless relatives are introduced by determiners, and headed relatives by the oblique marker or locative marker might receive explanation under the following scenario: As in Okanagan, the particles which introduce a pre-posed or headless relative in Secwepemctsín must be consistent with the selectional restrictions of the main clause predicate. In (32) for example, the clause must be introduced by a determiner, since the entire relative clause head ± clausal modifier constituent is a main clause transitive object argument.³⁰ If we assume that the moved determiner elides after the oblique marker in headed relatives, but that the oblique marker elides before the moved determiner in headless relatives (because

---
²⁹Kroeber states that for (31), “unfortunately, it is not clear whether it should be interpreted as a headed relative clause (modifying cptúk” [n sx’úynt] ‘hole [in the ice]’): if it is, then it would indicate that preposition fronting, or something like it, occurs in Secwepemctsín.” As an alternative, he explains that n “at” may code the adverbial relation of séx’m-ás “he bathed” to the main clause predicate.

³⁰To clarify, this does not mean that the main-clause predicate selects the determiner in these cases, since the determiner has moved from a clause-internal position, but only that the determiner is consistent with the main-clause predicate’s selectional restrictions. This same requirement also holds for Okanagan, and explains why pre-posed relatives are marginal or ungrammatical in certain cases.
of the aforementioned consistency requirement), then we have a straightforward explanation for the data. Formally speaking, all relatives in Secwemetsín are of category XP, as they are in Nłā?kepmxcin, but the X position is null for headless relatives.31

My analysis predicts that either the oblique marker or determiner may introduce a clausal remnant, but not both. Indeed, the non-co-occurrence of these particles seems to be a general feature of the Secwemetsín grammar, since locative adjuncts, for example, are introduced only by prepositions, and never with a co-occurring determiner (Gardiner, p.c.). Note that under this analysis, there is no principled reason why a headed relative might not be introduced by a determiner, as occurs in Okanagan. Data from Kuipers (1974) and Kroebert (1999) suggest that this pattern is indeed possible (33).32

(33) a. y?éne ḷəxéʔ t qlmúxw ... y kʷxʷ-nt-es y
   that powerful ATT person ... DET beat-TR-3SG.ERG DET
   ḷ[yúm t kʷúkʷpy.
   big ATT chief
   the clever (powerful) Indian ... who had won against the great chief.
   (ShL T7.85),(Kroebert, 1999, 301)

b. ?el w?éx nəʔʔiʔ y cncénənm y cwéʔ̓mos t sqléw.
   CONJ AUX DEM DET Chinese DET panning OBL gold
   And there were Chinese there, who were panning for gold.
   (Kuipers, 1974, 103)

It may therefore be the case that it is only a strong preference, not a requirement, that the moved determiner (rather than the oblique marker) elide in the case of a headed relative. This means that in Secwemetsín, similar to Nłā?kepmxcin and Okanagan, both particles are underlyingly present, but that a co-occurrence restriction in Secwemetsín prevents both from surfacing simultaneously.

Clearly, more work is needed on relativization in Secwemetsín, but for the present purposes, it is important simply to take note of two facts: (i) that oblique t introduces headed relatives, regardless of the grammatical status of the relativized

31It is also possible that the determiner l in (32) does not have its source from within the relative clause, but rather introduces the containing DP, whose head happens to be null. This derivation is somewhat more complex, and results in an intermediate stage ordering of DET-OBL, which is unattested in the Northern Interior. In any case, a determiner test similar to that used in Koch (2006) may help to clarify the issue.

32Gardiner (p.c.) suggests that a direct determiner introduces the clause in (33b) because this is an example of a headless relative clause, but it is currently unclear to me why cncénənm cannot be analyzed as the overt head.
constituent and locative extractions are consistent with a movement analysis.

In sum, data show that Northern Interior Salish relatives may be introduced by \( t \), crucially in cases where \( t \) does not code the relation of the gap to the clausal remnant. I now turn to the Southern Interior, and examine data from Nxa?amxcín.

4.3 Evidence from Southern Interior Salish: Nxa?amxcín

Nxa?amxcín (a.k.a. Moses-Columbia), a sister language to Okanagan, is similar to the Northern Interior languages just discussed, in that an oblique marker \( t \) introduces relative clauses, as shown in (34a). Pre-nominal relatives are also introduced by \( t \) in Nxa?amxcín (34b), as are headless relatives (34c).\(^{33}\) Unlike in Secwepemcitsín, there is no co-occurrence restriction preventing a determiner and oblique marker from both introducing a relative clause in Nxa?amxcín (34b).

(34) a. núxʷt ?ací sqoltmíxʷ t c-my-stū-n.
   go DET man OBL CUST-know-CAUS-1SG.ERG
   The man that I knew left. (Willett, 2003, 97, ex. 62)

b. wík⁷n ?aní t ?acmúxʷ t smámm.
   see-TR-1SG.ERG DET OBL CUST-laugh woman
   I saw the woman who laughed. (Willett, 2003, 100, ex. 74)

c. ?acsúxʷ sn ?aní t kí-čomusnxʷ.
   CUST-know-CAUS-1SG.ERG DET OBL kiss-DIR-3SG.ERG
   I know the one that you kissed. (Willett, 2003, 101, ex.77)

The ‘general’ article \( ?aní \) is used to introduce direct arguments of transitive predicates in Nxa?amxcín (Willett, 2003, 84),\(^{34}\) while the oblique marker \( t \), just as in Okanagan, is used to introduce non-direct arguments, for example intransitive objects, ditransitive themes, and ergative arguments (Willett, 2003, 87). The fact that \( t \) surfaces before a transitive relative clause like (34), where the object has

\(^{33}\) Oblique marking of ergatives in Nxa?amxcín is not limited to passive agents (Willett, 2003, 88), but from examples I have been able to find, the sequence \( ?aní t \) found in (34b) occurs only before relative clauses. This suggests that the oblique marker in (34b) is associated with the clausal remnant, and not the moved DP.

\(^{34}\) Or one of three ‘deictic’ determiners, \( ?axáʔ ‘proximal’, ?ačí ‘non-proximal’, and ?ahíʔ ‘distal’. Note their phonological resemblance to demonstratives in Okanagan. The Nxa?amxcín data support Kroeber’s hypothesis concerning the source of DP-internal prepositions in the Southern Interior, if we assume that the Okanagan determiner \( i? \) was once a bi-syllabic demonstrative-like determiner, similar to Nxa?amxcín \( ?aní \), but later underwent truncation, which did not occur in Nxa?amxcín. \( ?aní \) may in fact be the only true determiner in Nxa?amxcín, since data in Mattina (2006) show that it, unlike the other determiners, cannot function as a predicate.
been extracted, is not consistent with an analysis where \( t \) has moved from a clause internal position. (34) therefore seems directly parallel to Secwepemc\( \text{t} \)sin (30a) and N\( \text{l}\)\( \text{a} \)kepm\( \text{c} \)\( \text{t} \)yn (28a), and the initial hypothesis is thus that \( t \) in (34) is the head of an XP in a structure essentially equivalent to (29).

Locative relative clause data, however, show that (29) is not a correct representation of relative clause formation in N\( \text{x}\)\( \text{a} \)\'am\( \text{x} \)c\( \text{t} \)n. (35) below show determiner-locative marker sequences introducing the clausal remnant, which is characteristic of locative adjunct extractions in Okanagan (cf 18), except that an additional \( t \) occurs on the inside of the moved DP.\(^{35}\)

\[
(35) \quad \begin{align*}
\text{a. q}^\text{w}^\text{tunt} & \ ?\text{an}^\text{i} \ x\ddot{\text{u}}_2 & \left[ [\text{?}\text{an}^\text{i} \ \text{lei} \ [\varnothing \text{NP}_3]_{\text{DP}_1}] \ t \right. \\
\text{big-STAT} & \ \text{DET} & \ \text{rock} & \ \text{DET} & \ \text{in}.\text{there} & \ \text{OBL} \\
\text{?}\text{in}^\text{n}\ddot{\text{i}}\text{nk} & \text{m}^\text{n} & \text{t}_1^\text{CP}]. \\
\text{POS}-\text{put}.\text{down}-\text{DIR}-1\text{SG.ERG} & \ 1\text{SG.POSS-knife} \\
\text{The rock under which I laid the knife is big.} & \text{(Willett, 2003, 99, ex.71)}
\end{align*}
\]

\[\begin{align*}
\text{b. nast} & \ ?\text{ax}^\text{a} & \ ?\text{an}^\text{i} \ \text{pa}\ddot{\text{n}}\text{p}\text{n}^\text{aq}^\text{s}_2 & \left[ [\text{?}\text{an}^\text{i} \ \text{lei} \ [\varnothing \text{NP}_3]_{\text{DP}_1}] \ t \right. \\
\text{heavy-STAT} & \ \text{DEM} & \ \text{DET} & \ \text{pa}\ddot{\text{n}}\text{p}\text{n}^\text{aq}^\text{s} & \ \text{DET} & \ \text{in}.\text{there} \\
\text{t} & \ \text{nal} & \text{ix} & \ ?\text{in}^\text{t}\ddot{\text{o}}\text{mt}\ddot{\text{a}}\text{m}^\text{u} & \text{t}_1^\text{CP}]. \\
\text{OBL} & \ \text{POS}-\text{put}.\text{down}-\text{TR}-1\text{SG.ERG} & \ 1\text{SG.POSS-clothing} \\
\text{The pa}\ddot{\text{n}}\text{p}\text{n}^\text{aq}^\text{s} \ \text{where I put my clothes is heavy.} & \text{(Willett, 2003, 99, ex.70)}
\end{align*}\]

It is important to note that sequences of determiner-locative-oblique are only possible in extraction contexts in N\( \text{x} \)\( \text{a} \)\'am\( \text{x} \)c\( \text{t} \)n, which means that \( t \) cannot have moved with the locative DP. Together with Okanagan (26) above, (35) constitutes strong evidence that oblique-marked relative clauses in the Southern Interior, just as in the Northern Interior, do not necessarily involve movement of an oblique marker.

Southern Interior Salish languages are thus similar to their Northern Interior

---

\(^{35}\)The locative morpheme \( \text{le}^\text{i} \) is segmentally, and semantically, more complex than what I analyze as locative K heads in Okanagan. Moses also has the simpler locative ‘prepositions’ found in Okanagan, for example \( \text{l} \). I currently lack data showing a locative relevant clause introduced by \( \text{?an}^\text{i} \ l \), although I predict that these should be possible, since \( \text{?an}^\text{i} \ l \) introduces nominal adjunct in main-clause ‘prepositional-phrase’-like contexts. Locative \( \text{le}^\text{i} \) resembles more closely the Okanagan demonstrative adverbial \( \text{il}^\text{t} \) “there”, but must be analyzed differently, since demonstratives in Okanagan do not occur internal to DP, but adjoin to the exterior. I label \( \text{le}^\text{i} \) as a Loc head, rather than a K head, for this reason.

It is possible that \( \text{le}^\text{i} \) is a clause-initial locative adverb, and has not moved with the determiner, which in turn means that \( t \) does not mark the left-periphery in these cases but is situated further inside the clause. A further structural revision will be necessary if this is true. It nevertheless seems reasonable to tentatively assume that since \( \text{le}^\text{i} \) codes the relation of ‘the rock’ to the relative clause predicate in (35a), that it may also have undergone movement with the determiner.
counterparts with respect to relative clause formation, but with one important difference: the oblique marker which introduces the relative clause surfaces before the moved constituent in the Northern Interior, but after the moved constituent in the Southern Interior. This difference implies a structural distinction with regards to relative clause formation. I now turn to an analysis of this difference.

5 Analysis

I propose that in both Northern and Southern Interior languages, the left-periphery of a relative clause is defined by XP, rather than CP, as implied by Koch (2006). The difference is that in the Northern Interior languages, a clause-internal DP moves to the specifier position of CP (cf 29) while in Southern Interior languages, a clause-internal DP moves to the specifier position of XP. Okanagan (36a,b) represents data given earlier as (25a,b).

(36) a.

```
  KP
   /\    \
  K    NP
     /\   /\   \
   t NP      XP
      /\   \\   \
     N    Spec CP
        /\   /\   \
       sqalnix*j DPhj X
          /\   /\   \
         D     CP    
            /\   /\   \
           K    X   C
              /\   /\   \
             t NP  TP  
                /\   /\   \
               t N    ...  
                  /\   /\   \
                 proj VP   
                    /\   /\   \
                   ksknxixams. DP_t
```

“...a man who will help you.”
This higher landing site (Spec XP) derives the correct ordering between the initial moved determiner and the following relative clause oblique marker, which is the pattern characteristic in the Southern Interior. This structure will also correctly derive locative relative clauses in Okanagan, as well as Nxa?amxcín (37):

(37)...

"...the rock under which I laid the knife."
This analysis predicts that determiner-locative-oblique sequences should be possible in Okanagan, just as in Nxaʔamxcín (37). This is so far unattested in Okanagan, and may be due to a co-occurrence restriction on sequences of case-marking locative and/or oblique markers. In other words, a double case-marker filter\footnote{Similar in spirit to the Double Determiner Filter advocated by Davis (2010) for St’át’imcets relative clauses. The double case-marker filter presumably applies only to two sequences of oblique markers in Nxaʔamxcín, while Okanagan has extended the filter to include sequences of any two case markers.} in Okanagan prevents a sequence of two oblique markers in instrumental and passive agent extractions (38), and a locative-oblique marker sequence in locative adjunct extractions.\footnote{Although if my morpho-phonological analysis of (26) is correct, and proclitics attach to the leftmost element in XP (in this case \textit{t}), the prediction is that determiner-locative-proclitic-oblique sequences should be possible, since the double-case-marker filter would not apply in these cases.}

(38) a. Mike wiks iʔ tklmlxl w iʔ, [iʔ t, [\(\cap NP_2\)]DP_1] Mike see-(DIR)-3SG.ERG DET woman DET OBL (*1) cúmqʔ-nt-m t_{1,XP}]. (*OBL) kiss-DIR-PASS Mike saw the woman he was kissed by.

This analysis has the advantage of explaining the overwhelming preference in Okanagan for post-nominal relative clauses, as opposed to their pre-posed equivalents. Although pre-posed relatives are in certain cases possible in Okanagan (cf...
21b), these are generally marked since the particles which introduce the pre-posed clausal remnant must also match the selectional restrictions of the main clause predicate. To illustrate, consider again (38). The relative clause i? t āmgs-nt-m ‘who he was kissed by’ cannot be preposed over the head-containing DP i? tkmlxw ‘the woman’ because the sequence i? t cannot introduce an object of a sentence-initial main-clause transitive predicate like wiks ‘He saw x’. In other words, it is necessary for the case marker t to delete in order for the entire relative clause + head constituent to be construed as the DP object argument of the main predicate, but then the relation between the gap and the relative clause is obscured. The following structure is therefore ungrammatical:

(39)

```
\( ... \)
```

“...the woman he was kissed by.”

The same reasoning explains why pre-posed locative relatives are ungrammatical in Okanagan. For an example like (18a, 40), the entire relative clause + head constituent can only be construed as an object argument of the main clause predicate if the constituent is introduced by i?. This requires that the locative case marker tl delete, but then this obscures the relation between the gap and the relative clause, as well as resulting in the loss of valuable deictic information. (40) is therefore ungrammatical, while the post-nominal equivalent is acceptable.

---

38See above my hypothesis for why headed relatives in Secwepemctsin are introduced by oblique markers, and headless relatives are introduced by determiners.

39The requirement that the particle(s) which introduce a head + clausal modifier (or clausal modifier + head) clearly reflect the relationship between the constituent as a whole and the main clause predicate is also active in Secwepemctsin, and explains why headless relatives like (32) are introduced by a determiner rather than an oblique marker.
“...the man they were running away from.”

Interestingly, the pre-posed equivalents of Okanagan (25a,b) are acceptable:

“...the man who will help you.”

Because τ in these cases does not code the relation between the gap and the clausal remnant (i.e. it does not move as a constituent with the clause-internal DP), but only serves to ‘optionally’ introduce the relative clause, it may easily elide in order for the entire clausal remnant + head DP constituent to be construed as an argument.
of the main predicate. (41) is therefore acceptable.

In sum, Okanagan, like Nlq̓é?kepmxcín, Secwepemctsin, and Nxaʔamxcín, uses t to introduce relatives, and this use of t is independent of t as a case marker, which codes the relation between the gap and the clausal remnant.40

Like Stʼátʼimcsets (Davis, 2010), Nxaʔamxcín allows pre-nominal relatives, like example juvbk above. These can be derived from a canonical post-nominal structure by simply inverting the order of the NP and the adjoined XP modifier, as shown in (42).

This implies that in Nxaʔamxcín, head-modifier ordering between NP and XP is in free variation. The NP-final variant will result in a sequence of two determiners, one of which will delete as a result of a Double Determiner Filter (Davis, 2010, 22).41

---

40 As mentioned before, there are aspectual restrictions on where relative t can surface in Okanagan, which does not seem to be characteristic of any of the other languages surveyed here. Additionally, there is no clear ‘matching’ effect between nominal and head-introducing particles in any of the other languages, as there seems to be in Okanagan, but the prediction is that if Secwepemctsin allowed determiners and locative/oblique markers to co-occur, that a matching effect would also be evident.

41 Davis formulates this as consisting of two parts:

(i) a. **Double Determiner Filter**

   *[D₁...D₂] where no lexical head intervenes between D₁ and D₂*

   b. **Determiner Deletion**

   Delete one of two phonologically adjacent determiners.
Finally, this analysis offers an explanation of why in Nxa?amxcín, the optional absolutive case-marker *wa* surfaces to the right of an associated absolutive argument in extraction contexts, but surfaces to the left of the absolutive argument in other contexts (Willett, 1996, 2003).

(43) a. mǎ́yʷ*-s *wa* nlxʷátkʷtn smʔámm.
   break-(TR)-3SG.ERG ABS pot woman
   ‘The woman broke the pot.’ (Willett, 2003, 114, ex. 157)

   t kľcomús-ňt-s kǐyána? t₁XP].
   OBL kiss-TR-3SG.ERG girl
   ‘I know the boy that the girl kissed.’ (Willett, 2003, 97, ex. 63)

In Nxa?amxcín, determiners are regularly absent before argument nominals (Mattina, 2006), as shown in (43a). The categorical status of the moved constituent in (43b) is thus called into question. As opposed to the Nxa?amxcín locative markers, *wa* is not a DP-internal K-head since it may apparently precede a determiner in main clause contexts. It introduces both simple absolutive DPs (44a), as well as headless relative clauses which are absolutive DP arguments of main-clause predicates (44b).

(44) a. ?ac-yá-y-axʷ *wa* [[?ałúʔ? kkǐyáʔ-*sDP]] t ʔxǎx̌ápaʔ.
   ASP-weave-ASP ABS DET grandmother-3SG.POSS OBL bag
   ‘His grandmother is weaving a bag.’ (Mattina, 2006, 105, ex.14).

   b. ?ica kʷa ?ač̌x-s *wa* [[?ałúʔ? [∅NP₂]₁DP₁] t
   then see-(TR)-3SG.ERG ABS DET OBL
   ?ac-xʷúwi t₁XP].
   ASP-fly
   ‘Then he saw the one flying.’ (Mattina, 2006, 125, ex.103).

As indicated by the bracketing in (43b), the examples in (44) show that *wa* is a DP-external case marker (Bittner and Hale, 1996), and implies that Nxa?amxcín has two separate structural positions reserved for case-marking: one is DP-internal,

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42 ‘His grandmother’ in (44a) is the subject argument of an intransitive predicate, hence the absolutive marking on the subject, and the oblique marking on the notional object. For (44b), it is unclear whether *wa* has moved with the clause internal DP (cf 43b) or indicates that the entire relative clause is an absolutive argument of the main-clause predicate. If the latter holds true, then the prediction is that a secondary *wa* should be grammatical before the DP *taní ttwít* ‘the boy’ in (43b).
the other is DP-external. Clearly more work is needed on this interesting problem.

By way of summary, if we assume that the clause-internal moved constituent in the Southern Interior languages lands in a higher position than in the Northern Interior languages, then with an otherwise identical structure and a minimal amount of extra syntactic machinery, we are able to successfully account for a wide range of relative clauses in Southern Interior Salish, as well as account for the somewhat aberrant distribution of oblique marking in Okanagan. Although relative clause data from Coeur d’Alene and Kalispel are sparse, what may emerge is an interesting split between the Northern and Southern Interior sub-branches of the family with regards to relative clause formation.

6 The relation between DP-internal prepositions and relative clause formation in the Southern Interior

Southern Interior Salish languages all share the striking property of having DP-internal locative marking, rather than the prepositions found in Northern Interior languages. In reconstructed Proto-Salish, prepositions also precede determiners, and so the question arises as to what caused Southern Interior languages to change the linear ordering of the determiner and preposition.

Kroeber (1999) suggests that determiners in the Southern Interior were originally DP and PP-adjointed demonstratives, which underwent truncation and an accompanying loss of deictic force, thus becoming the determiners that we know today. In the context of a PP, for example, an adjoined demonstrative became a determiner, and the original PP-internal determiners presumably disappeared.

I suggest here two possible alternative accounts of how Southern Interior Salish came to have DP-internal locative and oblique marking. Both accounts rest on my analysis of relative clause formation, which I have outlined in this paper. Under the first account, which is not consistent with Kroeber’s hypothesis, a change in relative clause formation conditioned a linear inversion between case markers and determiners. Under the second account, which is consistent with Kroeber’s hypothesis, the historical process outlined in the preceding paragraph conditioned a change in relative clause formation.

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43 Prepositions in Nlaka’pamux and St’s’át’imcets precede a determiner, while prepositions in Secwepemctsin never co-occur with a determiner.
44 The PREP-DET ordering holds everywhere in the Salish family except the Southern Interior.
45 Nxa’amcín offers the strongest evidence for Kroeber’s hypothesis. Both the determiners and demonstratives in this language have a CVCV shape, and so we can easily infer that perhaps Nxa’amcín determiners resisted the truncation which occurred with Okanagan determiners, for example (Mattina, 2006). Alternatively, Nxa’amcín may have completely lost its original determiners, and borrowed a set of demonstrative adverbs to replace them (Davis, p.c.).
6.1 Analysis 1: Change in Relative Clause formation Conditions Inversion

Consider an earlier stage of Okanagan, where relative clause formation occurred exactly as in Nhlakoopmekcín, and the language exhibited DP-external prepositions:

(45) **Stage 1:** Equivalent to Nhlakoopmekcín

a. iʔ səxʷmaʔmáyaʔm-s₂ [t iʔ [CP [DP₁] DPN₁] knxít-t-m]  
   DET teacher-3SG.POSS OBL help-DIR PASS  
   t₁ OBL DET boy
   ...the teacher who was helped by the boy.

b. iʔ səxʷmaʔmáyaʔm-s₂ [t [(t) iʔ [CP [DP₁] DPN₁] P₃ₖ]  
   DET teacher-3SG.POSS OBL (OBL) DET  
   knxít-t-m t₁ 1 iʔ səqəqəmíntən-LOC DET school
   help-DIR PASS DET school
   ...the teacher that helped him at school.

Example (45a) includes an extracted passive patient, and example (45b) includes an extracted passive agent. (45a) additionally has a clause-internal prepositional phrase which is the oblique-marked clause-internal agent. (45b) has a clause-internal locative prepositional phrase. Just as in Nhlakoopmekcín today, Okanagan relatives were at one time always introduced by the oblique marker (head X), and a clause-internal DP (or PP) moved to the specifier position of CP. In (45b), which involves extraction of a passive agent, this resulted in a sequence of two oblique markers, only one of which was presumably realized.⁴⁶

At some point during the development of Southern Interior languages, an unknown event prompted a change in relative clause formation. The moved DP (46a) or PP (46b) now lands in the Specifier position of XP, rather than CP:

(46) **Stage 2:** Movement to Spec XP instead of Spec CP

a. iʔ səxʷmaʔmáyaʔm-s₂ [iʔ [CP [DP₁] DPN₁] t knxít-t-m]  
   DET teacher-3SG.POSS DET help-DIR PASS  
   t₁ OBL DET boy
   ...the teacher who was helped by the boy.

⁴⁶Note that an overt clause-internal oblique-marked agent is necessary in (45a) to confirm the status of the extracted constituent as a patient, since both patient and agent extractions introduce the clausal remnant by the same surface sequence of particles. It is possible that this ambiguity helped motivate an inversion between the determiner and case markers.
det teacher-3SG.POSS OBL det OBL
[knit-t-m t1 i? sánqymíntan CP XP]
help-DIR-PASS LOC Det school
...the teacher that helped him at school.

As can be seen in (46) this change resulted in a discrepancy between the linear order of determiner and preposition found in non-extraction contexts on the one hand (PREP-DET), and in extraction contexts on the other hand (DET-PREP). This discrepancy motivated an inversion of determiner and preposition in non-extraction contexts, on analogy with the ordering found before relative clauses:

(47) **Stage 3:** Inversion of P to case marker, then loss of relative t

det teacher-3SG.POSS det OBL help-DIR-PASS
 t1 i? t tawit CP XP]
det OBL boy
...the teacher who was helped by the boy.

b. i? saxw’máymáya?m-s2 [[i? [Ø[NP2]DP1] t  
det teacher-3SG.POSS det OBL help-DIR-PASS
 t1 i? i? sánqymíntan CP XP]
det OBL DET LOc school
...the teacher that helped him at school.

The oblique marker which always precedes relative clauses is then lost in cases of passive-patient extraction (47a), since it is now indistinguishable from a case-marker t which has become associated with agent-extraction. In agent-extractions (47b), relative t merged with the case-marker. Today, relative t only surfaces in Okanagan where it cannot be misconstrued as a case-marker: that is, optionally before future marked relatives.

**6.2 Analysis 2: Loss of original determiners conditioned a change in relative clause formation**

The second alternate analysis is consistent with Kroeper (1999). We begin again with an earlier stage of Okanagan essentially equivalent to Nlú?kepmxcín (45).

The original determiners were lost as DP and PP-joined demonstratives evolved into a new set of determiners (in red type), which occurred external to the original prepositions (Stage 2b):
Stage 2b: Loss of original determiners and evolution of original demonstratives into a new set of determiners

a. i? səxʷmá?máya?m-š₂ [t [i? iʔ ⌒ ⊎NP₂]DP₁]
det teacher-3SG.POSS OBL DET DET
knxít-t-m t₁ iʔ t iʔ tətwít₃₃C₃P₃]XP]
help-DIR-PASS DET OBL DET boy
...the teacher who was helped by the boy.

det teacher-3SG.POSS OBL DET OBL DET
knxít-t-m t₁ iʔ l iʔ sənqoyimtəX₃CP₃XP]
help-DIR-PASS DET LOC DET school
...the teacher that helped him at school.

During the final stage 3, movement of a clause-internal DP or PP was shifted to a higher position, in order to level the discrepancy between the linear order of determiner and preposition found in non-extraction contexts (DET-PREP), and that found in extraction contexts (PREP-DET). This stage is represented above as (47).

6.3 Weighing the two analyses

The two analyses sketched above differ in the following way: For Analysis 1, the syntax is driving the morphology, while for Analysis 2, the morphology is driving the syntax. Kroeberr’s hypothesis concerning the origin of the DP-internal locative markers found in the Southern Interior is grounded in typological fact: cross-linguistically, determiners often have their origins in demonstratives (Greenberg, 1978). Furthermore, I have no answer for what factor could possibly motivate the change in relative clause formation preferred by Analysis 1, if not the loss of the original determiners, following Kroeberr’s hypothesis. Although it is possible that there is a precedent for such a change in other languages, I do not know of any. Analysis 2 seems preferable for these reasons.

There is at least one piece of evidence that seems to support Analysis 1 over Analysis 2, however, if for no other reason than it either calls into question Kroeberr’s hypothesis, or introduces new questions concerning the time depth and ordering of the necessary changes. The Secwepemc deteminer γʔə (a) is probably cognate with the Okanagan deteminer iʔ (Davis, p.c.). Secwepemc and Okanagan belong to different sub-branches of the Salish family, which suggests a considerable time depth, but while Okanagan has DP-internal locative markers, Secwepemc exhibits the remnant of the proto-Salish prepositional system. Although determiners and prepositions/locative markers do not co-occur sequentially
in Secwepemctsín (Gardiner, p.c.), it does have an oblique-irrealis ‘article’, *tak, which is used to mark non-specific nominals (Gardiner, 1993, 26):

(49)  

a. kúl-m tə máxéxyə?.  
make-MID OBL basket  
She made a basket.

b. meʔ kúl-m əkʷə tak máxéxyə?.  
EXP make-MID REP OBL.IRR basket  
She’s going to make a basket. (Gardiner, 1993, 26)

tak is cognate with the Nləʔkepmxcín oblique-irrealis determiner complex *tk found before relative clauses (cf 28b). Furthermore, Gibson (1973) analyzes Secwepemctsín tak as consisting of the oblique marker *ta plus the irrealis determiner *k. Diachronically at least, this certainly seems to be the case, which means that Secwepemctsín did exhibit the proto-Salish PREP-DET ordering at one point during its history, thus placing it in line with the other Northern Interior languages.

Assuming cognacy between Okanagan *ʔ and Secwepemctsín proximal determiner *ʔə, and that *ʔə occurs in the same syntactic position as the irrealis determiner *k, we might infer that a proximal oblique in Secwepemctsín was once introduced by *ʔə *ʔə, and a locative oblique by *ʔə *ʔə, for example. But if both Okanagan and Secwepemctsín determiners have evolved from DP/PP-adjoined demonstratives, then we must conclude that for Secwepemctsín, an additional set of locative particles evolved outside of the new DP domain, and the original locative markers were lost along with the original determiners. This would effectively mean that Secwepemctsín was once like Okanagan is today, with DP-internal locative marking, but there is no evidence that Northern Interior languages ever had such structures.

And so depending on the strength of the cognate relation between Okanagan *ʔ and Secwepemctsín *ʔə, Analysis 1 may actually garner some support.

7 Further Questions

There are many questions which remain, but I will endeavor to address a few of the most salient here.

First of all, if Kroeber’s hypothesis is incorrect, then we still have an explanation for why Southern Interior Salish languages have DP-internal locative marking (Analysis 1), but suddenly have no explanation for what may have conditioned a change in the way relative clauses are formed. I do not have anything illuminating to say on this issue at the moment, but it may be an avenue worth exploring.
Second, what is the categorical status of “XP” in Salish, and what syntactic generalizations could follow from assigning X one category label in lieu of another? For the Southern Interior at least, it is possible to analyze X as C; in other words, the oblique marker which introduces relative clauses may be a kind of complementizer. I refrain from making this claim because for Okanagan at least, in contexts involving non-relative clausal subordination, t is not found; i.e. it is not used as a complementizer. It is possible that it is assigning oblique status to the CP as a whole, but it is unclear what new generalizations may emerge from this analysis. It is also possible that its categorical status differs within the Southern Interior, since in Okanagan but apparently not in Nxa?amxcín, relative t is only grammatical before predicates inflected with irrealis ks-. I have noted in passing that this could be happening on analogy with Nxs?kepmxcín tk, but there is in any case ample historical evidence to posit a separate syntactic position for t.

Thirdly, the nature of the 'matching’ relation between the particles which introduce the relative clause head, and the particles which introduce the clausal remnant, remains obscure for Okanagan. Secwepemcitsín relatives also display evidence for such a matching relation, although the relation is partially obscured by the absence of co-occurring determiners and oblique markers.

Finally, extraction data is glaringly scarce on Coeur d’Alene and Kalispel, which makes it difficult to say for sure whether my analysis of Okanagan and Nxa?amxcín relatives can truly be extended to the Southern Interior as a whole. But it is nevertheless suggestive that both languages have DP-internal locative markers:

(50) Coeur d’Alene (Doak, 1997, ex. 373b, 375)

a. čn  dexʷ-t xʷε trl tpuipyušn.
   1SG.NOM drop-RES DET FROM car
   I fell out of the car.

b. xʷε hṅəśin naqʷc xʷε stšá xʷε
   DET 1SG.POSS-cousin steal-DIR-3SG.ERG DET huckleberry DET
   trl Annie črəmqsn.
   FROM Annie Cherekin
   My cousin stole the berries from Annie Cherekin.

(51) Spokane (Carlson, 1972, 55); Kalispel (Kroeber, 1999, 62)

a. kʷéys tlu? xʷəl ̕ təpamís
   take-(DIR)-3SG.ERG DET LOC arrow-3SG.POSS
   He took it for his arrow.
b. kʷémt sxʷχéʔi ḥuʔ l :tēyeʔ esəmόʔqʷ.
   then mountain.goat DET LOC bad mountain
   (Then) the mountain goat is in the bad mountain (KL T9.44)

Kalispele, at least, also shows evidence that locative relatives are formed by movement:

(52) xʷuy łaqʷ-m-úleʔxʷ ḥuʔ l es-tixʷ-i t
    go come.into.open.space DET LOC CONT-obtain-CONT OBL
    s-šʷeʔlf.
    camas.in.ground
    He came to an open field where people were gathering camas.
    (Vogt, 1940), (Camp, 2007, 28)

Further work is needed on relativization in these languages before anything conclusive can be said with regards to the role of oblique marking in relative clauses.

8 Conclusions

I have claimed that Okanagan and Nxaʔamxcı́n show evidence that their relative clauses are formed by movement of a clause-internal DP to the left-periphery of the relative clause. Southern Interior languages thus form their relative clauses in a manner analogous to Northern Interior languages, but not identically. Otherwise anomalous oblique marked relative clauses in Okanagan, and a more general pattern of relativization in Nxaʔamxcı́n, together show that the moved constituent lands in a structurally higher position in these languages, than in the Northern Interior languages. Besides representing an interesting typological and syntactic split between two branches of the Salish family, I have suggested that this difference might also explain the DP-internal locative markers characteristic of Southern Interior languages.
Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
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<td>future</td>
<td>YNQ</td>
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References


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